

Listing of claims

1. (Currently Amended) A method for manufacturing a circular metal tank, comprising:
 - a) providing an elongated sheet of metal;
 - b) bending said sheet of metal along an upper longitudinal edge thereof to produce a first "L-shaped" bend;
 - c) bending said sheet of metal along a lower longitudinal edge thereof to produce a second "chair-shaped" bend, wherein the term "chair-shaped" means a structure that has two parallel, elongated sheets of metal extending out on either side joined by a cross member with the angle between either sheet and the cross member being at least 45 degrees;
 - d) moving said sheet of metal in a helical trajectory such that said second bend comes into proximity above said first bend;
 - e) welding said second bend to said first bend to form a wall of said tank, said wall having a continuous, leak-tight helical weld;wherein said first and second bends cooperate to form a helical roller track on an outside of said tank; andwherein said tank is supported on a plurality of rollers that engage said roller track; and wherein said tank is rotated about its longitudinal axis on said rollers such that said tank moves upwards as said sheet of metal is welded to a bottom thereof.

2. (Original) The method of claim 1, wherein said elongated sheet of metal is a coiled sheet of metal which is decoiled prior to said bending steps.
3. (Cancelled)
4. (Original) The method of claim 1, wherein said metal sheet is corrugated before said welding step.
5. (Original) The method of claim 1, wherein prior to said welding step adjacent portions of said first and second bends are gross positioned and then fine positioned.
6. (Original) The method of claim 1, wherein at least one of said rollers is motorized and said tank and said metal sheet are moved by means of said motorized roller.
7. (Original) The method of claim 1, wherein said metal sheet is made of one of aluminum, galvanized steel, stainless steel, carbon steel.
8. (Currently amended) The method of claim 1 3, wherein said first bend forms an angle of between 45 and 135 degrees with a body of said metal sheet.
9. (Currently amended) The method of claim 1 3, wherein said first bend has a width of 5 mm to 100 mm.
10. (Original) The method of claim 1, wherein a width of a horizontal portion of said second bend is between 5mm to 100 mm.
11. (Original) The method of claim 1, wherein a width of a vertical portion of said second bend is between 5mm to 150 mm.
12. (Original) The method of claim 1, wherein a top of said tank is cut so as to create an upper circumferential edge which is parallel to the ground.

13. (Original) The method of claim 1, wherein a bottom of the tank is cut during operation to create a lower circumferential edge which is parallel to the ground.

14. (Currently amended) A system for manufacturing a circular metal tank, comprising:

- (a) a decoiler for decoiling a coiled sheet of metal;
- (b) a bender/corrugator for introducing a first "L-shaped" bend along an upper longitudinal edge of said metal sheet and a second "chair-shaped" bend along a second longitudinal edge of said metal sheet, said "chair-shaped" bend having a structure that has two parallel, elongated sheets of metal extending out on either side joined by a cross member with the angle between either sheet and the cross member being at least 45 degrees;
- (c) a support system having rollers, for moving said metal sheet along a helical trajectory, supporting said tank and for rotating said tank about its longitudinal axis as said metal sheet is added to a bottom edge of said tank;
- (d) a welding positioner for positioning said second bend proximate and above said first bend;
- (e) a welder for welding said first and second bends together to form a leak-tight circular wall of said tank;

wherein said first and second bends cooperate to form a helical roller track on an outside of said tank; and

wherein said tank is supported on said rollers that engage said roller track.

15. (Original) The system according to claim 14, further comprising a vertical coil seam welder for butt-welding an end of a first coiled metal sheet to an end of a second coiled metal sheet before said metal sheet pass through said bender/corrugator.

16. (Original) A system according to claim 14, further comprising a welding pre-aligner for gross positioning said first and second bends before said first and second bends are positioned by said welding positioner.

17. (Cancelled)

18. (Original) A system according to claim 14, wherein said bender/corrugator additionally corrugates said metal sheet.

19. (Original) A system according to claim 14, wherein at least one of said rollers is motorized and said tank and said metal sheet are moved by means of said motorized roller.

20. (Original) A system according to claim 14, wherein said metal sheet is made of one of aluminum, galvanized steel, stainless steel, carbon steel.

21. (Original) A system according to claim 14, wherein said first bend forms an angle of between 45 and 135 degrees with a body of said metal sheet.

22. (Original) A system according to claim 14, wherein said first bend has a width of 5 mm to 100 mm.

23. (Original) A system according to claim 14, wherein a width of a horizontal portion of said second bend is between 5mm to 100 mm.

24. (Original) A system according to claim 14, wherein a width of a vertical portion of said second bend is between 5mm to 150 mm.

25.(Original) A system according to claim 14, further comprising means for cutting a top of said tank so as to create an upper circumferential edge which is parallel to the ground.

26.(Original) A system according to claim 14, further comprising means for cutting a bottom of the tank to create a lower circumferential edge which is parallel to the ground.